

SITE NAME: SECOND0 BUILDER: GREENPARK HOMES										DATE: Dec-18	LO# 80952	GFA: 3171	TYPE: PINEBROOK 3 WOB	WINTER NATURAL AIR CHANGE RATE	0.292	HEAT LOSS AT °F. 81	HEAT GAIN AT °F. 14	CSA-F280-12
ROOM USE	EXP. WALL CLG. HT.	FACTORS	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	COMP	ENS-2	WOB	BAS	WINTER NATURAL AIR CHANGE RATE	0.292	HEAT LOSS AT °F. 81	HEAT GAIN AT °F. 14	ENERGYSTAR
GRS.WALL AREA GLAZING	20.4	15.9	333	243	45	135	261	126	63	378	63	846	564	0.20	0.22	2867	3432	1291
NORTH	20.4	15.9	0	0	0	20	0	0	20	0	0	0	0	0.20	0.22	0	0	0
EAST	20.4	41.5	0	0	10	0	0	0	0	0	0	0	0	0.20	0.22	0	0	0
SOUTH	20.4	24.8	0	13	265	323	0	16	326	397	0	0	0	0.20	0.22	56	1140	2322
WEST	20.4	41.5	32	651	1327	14	285	581	0	0	0	0	0	0.20	0.22	0	0	8
SKYLT.	34.2	101.2	0	0	0	0	0	0	0	0	0	0	0	0.20	0.22	0	0	0
DOORS	27.0	4.7	0	0	0	0	0	0	0	0	0	0	0	0.20	0.22	0	0	0
NET EXPOSED WALL	5.4	0.9	301	1621	279	216	1163	200	35	188	32	115	619	107	231	1244	214	55
NET EXPOSED BSMT WALL ABOVE GR	3.9	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	296
EXPOSED CLG	1.6	0.7	336	539	238	170	273	121	75	120	53	255	409	181	198	318	141	105
NO ATTIC EXPOSED CLG	4.0	1.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	169
EXPOSED FLOOR	3.3	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75
BASEMENT/CRAWL HEAT LOSS			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	105
SUBTOTAL HT LOSS			2811	1985	761	1436	2828	1255	830	3432	975	846	564	0.20	0.22	2867	3432	1291
SUB TOTAL HT GAIN			0.20	0.22	0.20	0.22	0.20	0.22	0.20	0.22	0.20	0.22	0.20	0.22	0.20	0.22	0.20	0.22
LEVEL FACTOR / MULTIPLIER			630	445	170	322	633	281	186	769	218	846	564	0.20	0.22	2867	3432	1291
AIR CHANGE HEAT LOSS			0	0	93	0	346	0	0	0	0	0	0	0.20	0.22	0	0	0
AIR CHANGE HEAT GAIN			0	0	59	0	258	0	0	0	0	0	0	0.20	0.22	0	0	0
DUCT LOSS			2	480	0	1	240	1	240	488	488	488	488	0	0	0	0	90
HEAT GAIN PEOPLE			3441	2430	1024	1757	3807	1536	1015	4201	488	8511	13653	0	0	0	0	488
HEAT GAIN APPLIANCES/LIGHTS			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H			3850	1720	840	1797	3807	1536	1015	4201	488	8511	13653	0.20	0.22	2867	3432	1291
TOTAL HT GAIN x 1.3 BTU/H														0.20	0.22	2867	3432	1291

SITE NAME: SECONDO
BUILDER: GREENPARK HOMES

TYPE: PINEBROOK 3 WOB

DATE: Dec-18

GFA: 3171 LO# 80952

HEATING CFM 1122 COOLING CFM 1122
TOTAL HEAT LOSS 63,123 TOTAL HEAT GAIN 36,669
AIR FLOW RATE CFM 17.77 AIR FLOW RATE CFM 30.6

furnace pressure 0.6
furnace filter 0.05
a/c coil pressure 0.2
available pressure for s/a & r/a 0.35

#GOODMAN
GMEC960803BNA 80
FAN SPEED LOW
MEDLOW
MEDIUM
MEDIUM HIGH
HIGH

AFUE = 96 %
INPUT (BTU/H) = 80,000
OUTPUT (BTU/H) = 76,800
DESIGN CFM = 1122
CFM @ .6" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	12	8	4
R/A	0	0	4	2	1

All S/A diffusers 4"x10" unless noted otherwise on layout.
All S/A runs 5'Ø unless noted otherwise on layout.

RUN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19	20	21	22	23	24
ROOM NAME	MBR	ENS	WIC	BED-3	BED-3	BED-4	BATH	COMP	COMP	MBR	ENS-2	LV/DIN	DEN	KT/IFM	KT/IFM	KT/IFM	LAUN	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH	1.72	2.43	1.02	1.90	1.90	1.54	1.02	2.10	2.10	1.72	1.31	4.22	1.29	2.63	2.63	2.63	0.95	3.57	2.51	5.54	5.54	5.54	5.54
CFM PER RUN HEAT	31	43	18	34	34	27	18	37	37	31	23	75	23	47	47	47	17	63	45	98	98	98	98
RM GAIN MBH	1.93	1.72	0.84	1.84	1.84	1.86	0.62	2.33	2.33	1.93	1.29	2.28	1.21	2.04	2.04	2.04	1.03	0.63	1.08	1.00	1.00	1.00	1.00
CFM PER RUN COOLING	59	53	26	56	56	57	19	71	71	59	39	70	37	62	62	62	31	19	33	31	31	31	31
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	46	55	43	53	51	33	13	48	54	53	40	27	16	45	35	26	43	50	10	40	28	20	42
EQUIVALENT LENGTH	160	160	150	140	160	190	180	170	140	180	180	190	170	190	180	140	180	160	180	210	160	170	190
TOTAL EFFECTIVE LENGTH	206	215	193	193	211	223	193	218	194	233	220	217	186	235	215	166	223	210	190	250	188	190	232
ADJUSTED PRESSURE	0.08	0.08	0.09	0.09	0.08	0.08	0.09	0.08	0.09	0.07	0.08	0.08	0.09	0.07	0.08	0.08	0.1	0.08	0.09	0.06	0.09	0.09	0.07
ROUND DUCT SIZE	5	5	4	5	5	5	4	5	5	5	4	6	4	5	5	5	4	5	4	6	6	6	6
HEATING VELOCITY (ft/min)	228	316	207	250	250	198	207	272	272	228	264	382	264	345	345	345	195	463	516	500	500	500	500
COOLING VELOCITY (ft/min)	433	389	298	411	411	419	218	521	521	433	447	357	424	455	455	455	356	140	379	158	158	158	158
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10
TRUNK	A	A	D	C	C	A	C	B	B	A	A	C	E	A	E	E	B	B	E	A	E	C	B

RUN #	27
ROOM NAME	BED-2
RM LOSS MBH	1.76
CFM PER RUN HEAT	31
RM GAIN MBH	1.80
CFM PER RUN COOLING	55
ADJUSTED PRESSURE	0.17
ACTUAL DUCT LGH.	29
EQUIVALENT LENGTH	130
TOTAL EFFECTIVE LENGTH	159
ADJUSTED PRESSURE	0.11
ROUND DUCT SIZE	4
HEATING VELOCITY (ft/min)	356
COOLING VELOCITY (ft/min)	631
OUTLET GRILL SIZE	3X10
TRUNK	E

SUPPLY AIR TRUNK SIZE	TRUNK	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	RETURN AIR TRUNK SIZE	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	300	0.06	9.6	10	8	0	0.00	0	0	0	TRUNK O	0	0.06	0	0	8
TRUNK B	252	0.07	8.7	10	8	0	0.00	0	0	0	TRUNK P	0	0.06	0	0	8
TRUNK C	511	0.07	11.3	14	8	0	0.00	0	0	0	TRUNK Q	0	0.06	0	0	8
TRUNK D	829	0.06	1.4	22	8	0	0.00	0	0	0	TRUNK R	0	0.06	0	0	8
TRUNK E	291	0.08	8.8	10	8	0	0.00	0	0	0	TRUNK S	0	0.06	0	0	8
TRUNK F	0	0.00	0	0	0	0	0.00	0	0	0	TRUNK T	0	0.06	0	0	8
TRUNK G	0	0	0	0	0	0	0.00	0	0	0	TRUNK U	0	0.06	0	0	8
TRUNK H	0	0	0	0	0	0	0.00	0	0	0	TRUNK V	0	0.06	0	0	8
TRUNK I	0	0	0	0	0	0	0.00	0	0	0	TRUNK W	0	0.06	0	0	8
TRUNK J	0	0	0	0	0	0	0.00	0	0	0	TRUNK X	1122	0.06	15.7	30	8
TRUNK K	0	0	0	0	0	0	0.00	0	0	0	TRUNK Y	400	0.06	10.7	14	8
TRUNK L	0	0	0	0	0	0	0.00	0	0	0	TRUNK Z	0	0.06	0	0	8
TRUNK M	0	0	0	0	0	0	0.00	0	0	0	DROP	1122	0.06	15.7	24	10
TRUNK N	0	0	0	0	0	0	0.00	0	0	0						
TRUNK O	0	0	0	0	0	0	0.00	0	0	0						
TRUNK P	0	0	0	0	0	0	0.00	0	0	0						
TRUNK Q	0	0	0	0	0	0	0.00	0	0	0						
TRUNK R	0	0	0	0	0	0	0.00	0	0	0						
TRUNK S	0	0	0	0	0	0	0.00	0	0	0						
TRUNK T	0	0	0	0	0	0	0.00	0	0	0						
TRUNK U	0	0	0	0	0	0	0.00	0	0	0						
TRUNK V	0	0	0	0	0	0	0.00	0	0	0						
TRUNK W	0	0	0	0	0	0	0.00	0	0	0						
TRUNK X	1122	0.06	15.7	30	8	0	0.06	15.7	30	8						
TRUNK Y	400	0.06	10.7	14	8	0	0.06	10.7	14	8						
TRUNK Z	0	0.06	0	0	8	0	0.06	0	0	8						
DROP	1122	0.06	15.7	24	10	0	0.06	15.7	24	10						

TYPE: PINEBROOK 3 WOB
SITE NAME: SECONDO

LO # 80952

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

COMBUSTION APPLIANCES		9.32.3.1(1)
a)	☒ Direct vent (sealed combustion) only	
b)	☐ Positive venting induced draft (except fireplaces)	
c)	☐ Natural draft, B-vent or induced draft gas fireplace	
d)	☐ Solid Fuel (including fireplaces)	
e)	☐ No Combustion Appliances	

HEATING SYSTEM	
☒ Forced Air	☐ Non Forced Air
☐ Electric Space Heat	

HOUSE TYPE		9.32.1(2)
☒ I	Type a) or b) appliance only, no solid fuel	
☐ II	Type I except with solid fuel (including fireplaces)	
☐ III	Any Type c) appliance	
☐ IV	Type I, or II with electric space heat	
☐	Other: Type I, II or IV no forced air	

SYSTEM DESIGN OPTIONS		O.N.H.W.P.
☐ 1	Exhaust only/Forced Air System	
☐ 2	HRV with Ducting/Forced Air System	
☒ 3	HRV Simplified/connected to forced air system	
☐ 4	HRV with Ducting/non forced air system	
☐	Part 6 Design	

TOTAL VENTILATION CAPACITY		9.32.3.3(1)
Basement + Master Bedroom	2 @ 21.2 cfm	42.4 cfm
Other Bedrooms	3 @ 10.6 cfm	31.8 cfm
Kitchen & Bathrooms	4 @ 10.6 cfm	42.4 cfm
Other Rooms	8 @ 10.6 cfm	84.8 cfm
Table 9.32.3.A.	TOTAL	201.4 cfm

PRINCIPAL VENTILATION CAPACITY REQUIRED		9.32.3.4.(1)
1 Bedroom	31.8	cfm
2 Bedroom	47.7	cfm
3 Bedroom	63.6	cfm
4 Bedroom	79.5	cfm
5 Bedroom	95.4	cfm
TOTAL	79.5	cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	201.4	cfm
Less Principal Ventil. Capacity	155	cfm
Required Supplemental Capacity	46.4	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANE 65H	Location: BSMT
155.0 cfm	3.0 sones
☒	HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION	
CFM	ΔT °F
155.0 CFM	81 F
X	X
FACTOR	% LOSS
1.08	X
	0.25

SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	☒
BATH	QTXEN050C	50	☒

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANE 65H		
155 cfm high	64 cfm low	
75 % Sensible Efficiency	☒	HVI Approved
@ 32 deg F (0 deg C)		

LOCATION OF INSTALLATION	
Lot:	Concession
Township	Plan:
Address	
Roll #	Building Permit #

BUILDER: GREENPARK HOMES	
Name:	
Address:	
City:	
Telephone #:	Fax #:

INSTALLING CONTRACTOR	
Name:	
Address:	
City:	
Telephone #:	Fax #:

DESIGNER CERTIFICATION	
I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.	
Name:	HVAC Designs Ltd.
Signature:	<i>Michael O'Rourke</i>
HRAI #	001820
Date:	December-18

Specializing in Residential Mechanical Design Services

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** PINEBROOK 3 WOB**BUILDER:** GREENPARK HOMES**SFQT:** 3171**LO#** 80952**SITE:** SECONDO**DESIGN ASSUMPTIONS**

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-9	OUTDOOR DESIGN TEMP.	86
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	72

BUILDING DATA

ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	2.50	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	TIGHT	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	42899.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 62.0 ft	WIDTH: 32.0 ft	EXPOSED PERIMETER:	94.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	94.0 ft

2012 OBC - COMPLIANCE PACKAGE

Component	Compliance Package ENERGYSTAR	
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	50	50.72
Ceiling Without Attic Space Minimum RSI (R)-Value	31	20.54
Exposed Floor Minimum RSI (R)-Value	31	24.58
Walls Above Grade Minimum RSI (R)-Value	20 + 5	15.12
Basement Walls Minimum RSI (R)-Value	20	21.12
Below Grade Slab Entire surface > 600 mm below grade Minimum RSI (R)-Value	-	-
Edge of Below Grade Slab ≤ 600 mm Below Grade Minimum RSI (R)-Value	10	10
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value	10	11.13
Windows and Sliding Glass Doors Maximum U-Value	ZONE 2	-
Skylights Maximum U-Value	ZONE 2	-
Space Heating Equipment Minimum AFUE	0.95	-
HRV Minimum Efficiency	65%	-
Domestic Hot Water Heater Minimum EF	0.75	-

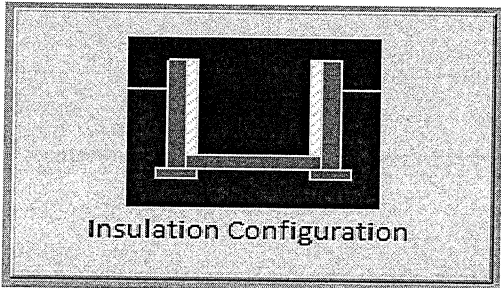
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

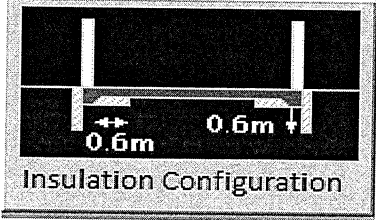
Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Bradford	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	12.5	 Insulation Configuration
Floor Width (m):	9.8	
Exposed Perimeter (m):	28.7	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.67	
Window Area (m ²):	0.9	
Door Area (m ²):	1.9	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		787

TYPE: PINEBROOK 3 WOB
LO# 80952

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Bradford	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Length (m):	9.4	 Insulation Configuration
Width (m):	9.8	
Exposed Perimeter (m):	28.7	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		461

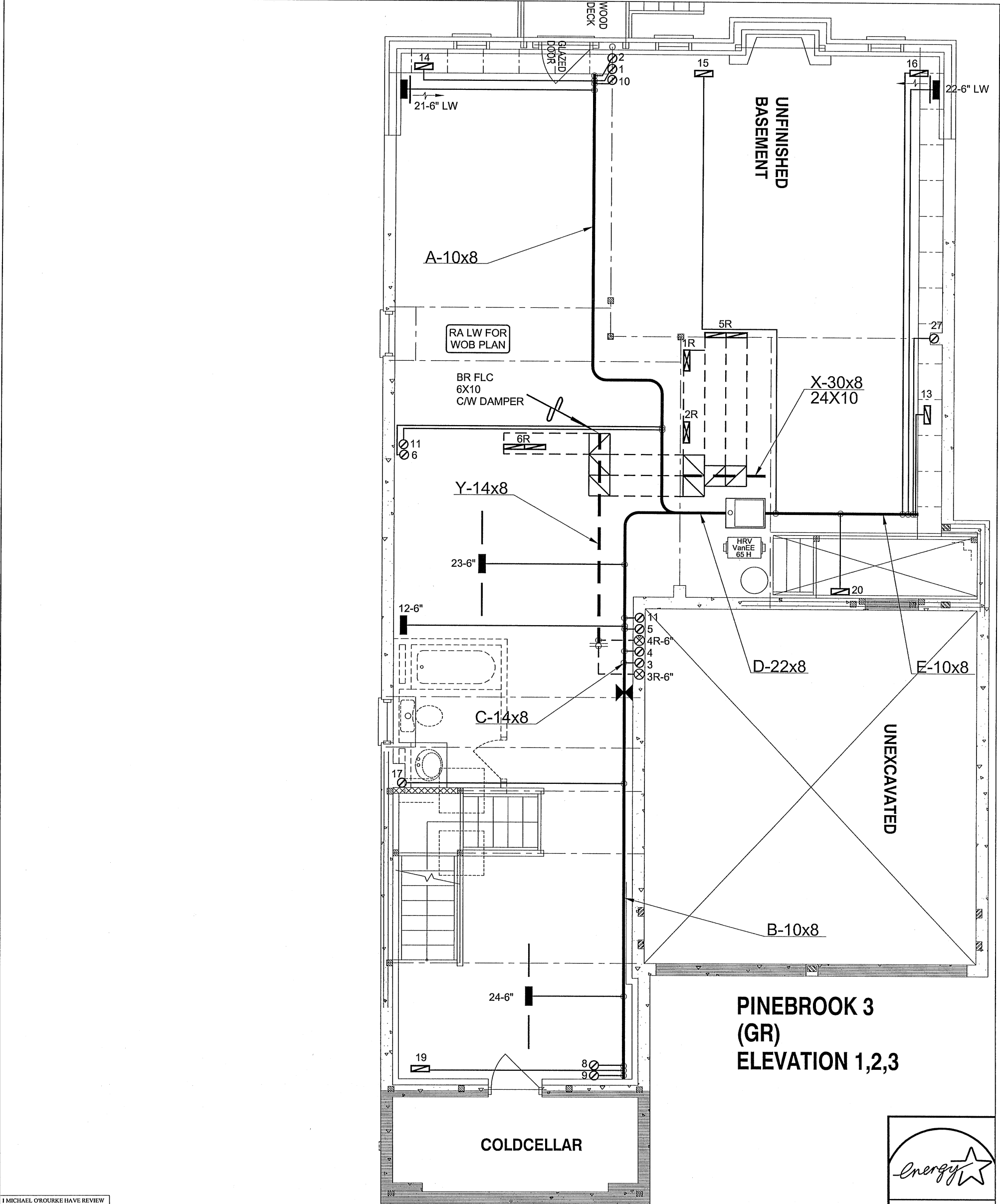
TYPE: PINEBROOK 3 WOB
LO# 80952

Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

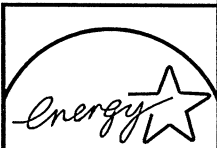
Weather Station Description			
Province:	Ontario		
Region:	Bradford		
Weather Station Location:	Open flat terrain, grass		
Anemometer height (m):	10		
Local Shielding			
Building Site:	Suburban, forest		
Walls:	Heavy		
Flue:	Heavy		
Highest Ceiling Height (m):	9.75		
Building Configuration			
Type:	Detached		
Number of Stories:	Two		
Foundation:	Full		
House Volume (m ³):	1214.8		
Air Leakage/Ventilation			
Air Tightness Type:	Energy Star Detached (2.5 ACH)		
Custom BDT Data:	ELA @ 10 Pa.	1134.0 cm ²	
	2.50	ACH @ 50 Pa	
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust	
	73.2	73.2	
Flue Size			
Flue #:	#1	#2	#3
Diameter (mm):	0	0	0
Natural Infiltration Rates			
Heating Air Leakage Rate (ACH/H):	0.292		
Cooling Air Leakage Rate (ACH/H):	0.091		

TYPE: PINEBROOK 3 WOB
LO# 80952



I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.



ENERGY STAR

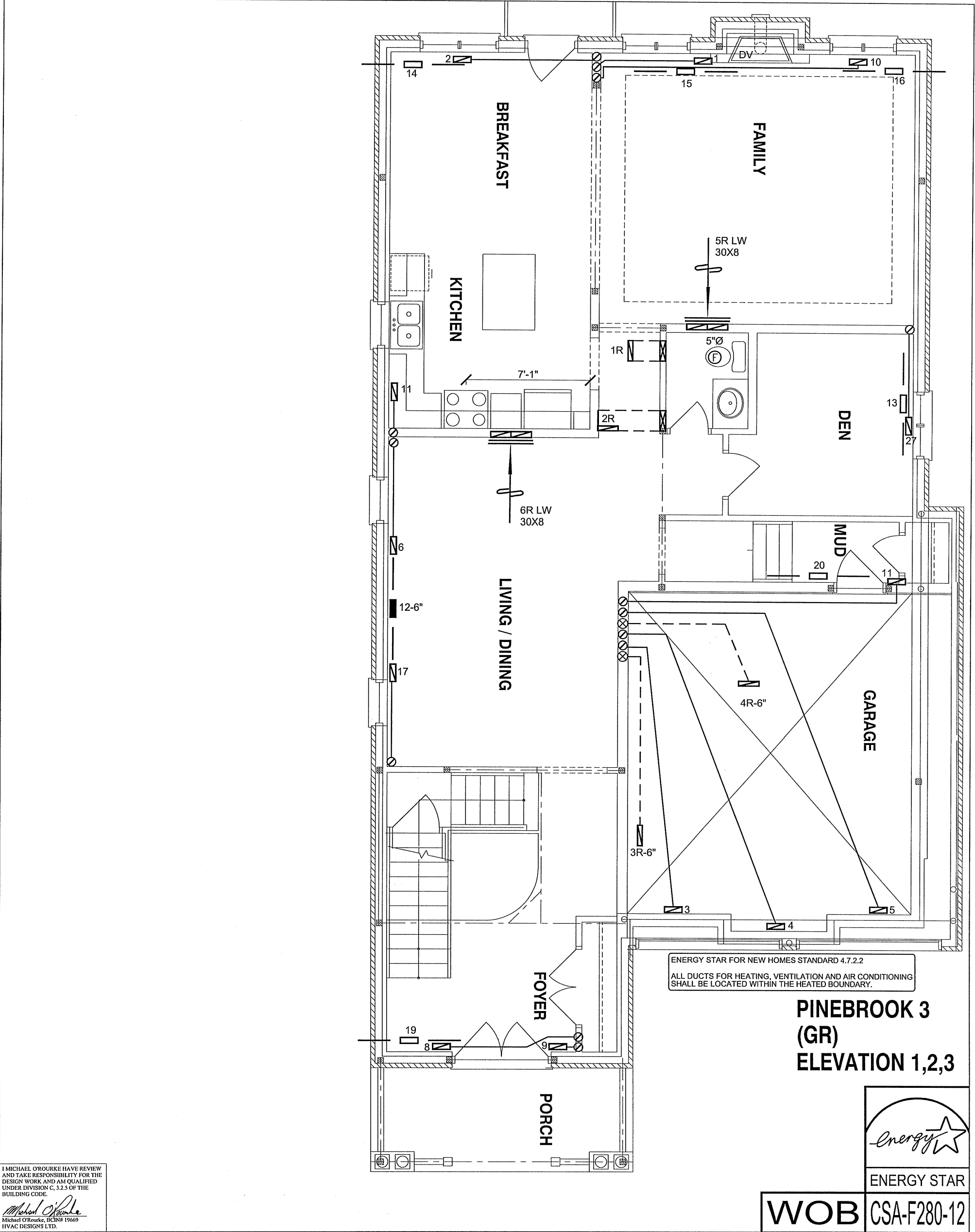
WOB

CSA-F280-12

HVAC LEGEND							REVISIONS	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	
							No.	Date

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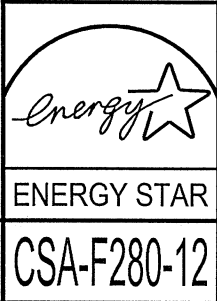
Client		 375 Finley Ave - Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services	HEAT LOSS 66530 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title	
Project Name SECONDO EAST GWILLIMBURY, ONTARIO WOB PINEBROOK 3 3171 sqft			MAKE GOODMAN	3RD FLOOR				BASEMENT HEATING LAYOUT	
			MODEL GMEC960803BNA	2ND FLOOR	12	4	3		
			INPUT 80 MBTU/H	1ST FLOOR	8	2	2		
			OUTPUT 76.8 MBTU/H	BASEMENT	4	1	0	Date	DEC/2018
			COOLING 3.0 TONS	ALL S/A DIFFUSERS 4 "x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A					Scale
		FAN SPEED 1122 cfm @ 0.6" w.c.						BCIN# 19669	
							LO#	80952	



I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

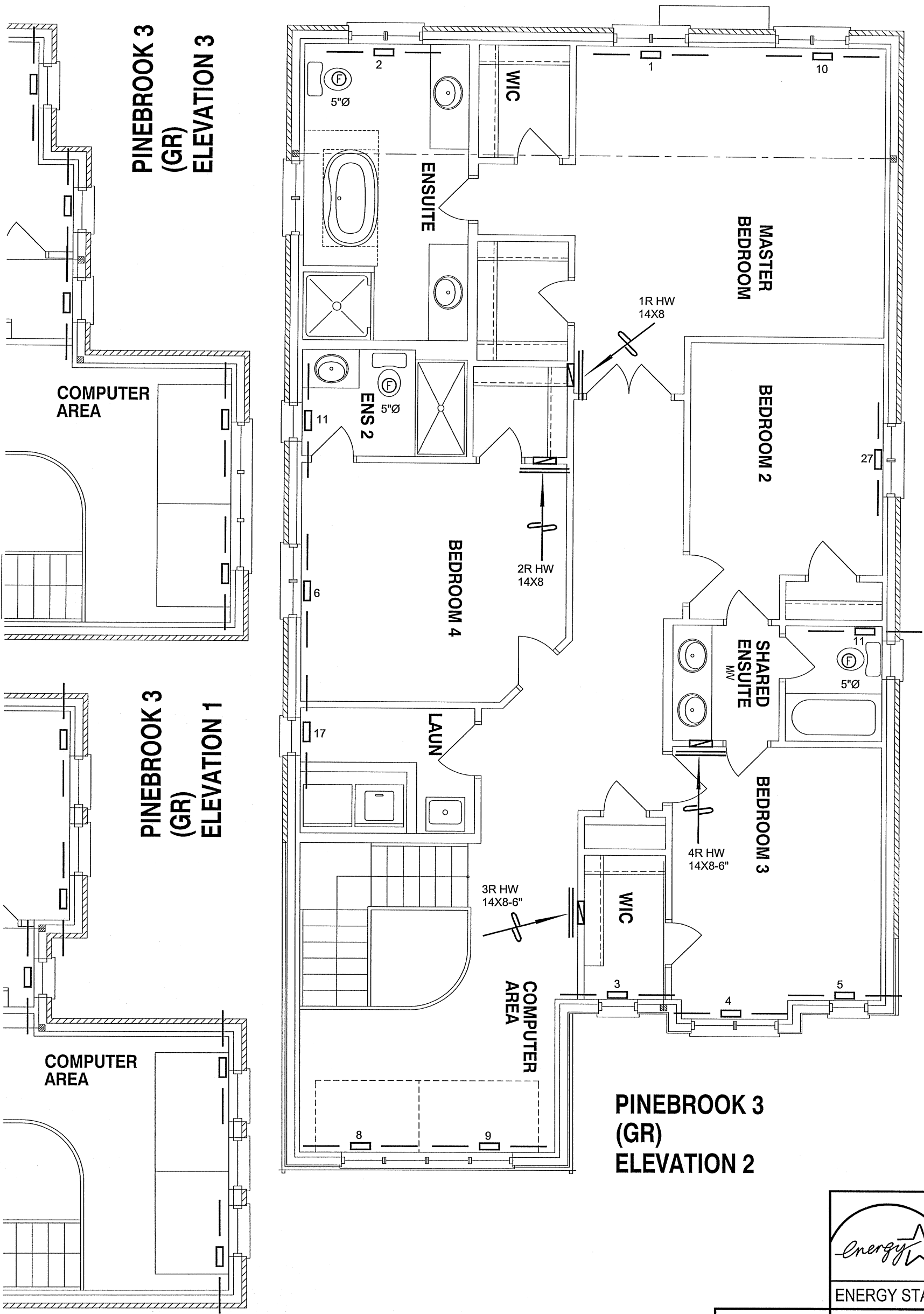
**PINEBROOK 3
(GR)
ELEVATION 1,2,3**



HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS		

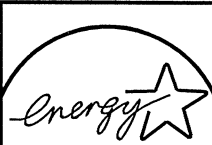
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Client GREENPARK HOMES		 375 Finley Ave - Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.	Sheet Title FIRST FLOOR HEATING LAYOUT	
Project Name SECONDO EAST GWILLIMBURY, ONTARIO			Date DEC/2018	
WOB PINEBROOK 3			Scale 3/16" = 1'-0"	
3171 sqft			BCIN# 19669	
			LO#	80952



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Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.



ENERGY STAR

WOB CSA-F280-12

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS		

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Project Name SECONDO EAST GWILLIMBURY, ONTARIO			Date DEC/2018	
WOB PINEBROOK 3 3171 sqft			Scale 3/16" = 1'-0"	
			BCIN# 19669	
			LO# 80952	